
# Portable Dryer Installation and Towing

Installation and Towing Manual

PNEG-338

Date: 09-18-07

GSI GROUP

PNEG-338

# Contents

## 1. Introduction

READ THIS MANUAL carefully to learn how to properly use and install equipment. Failure to do so could result in personal injury or equipment damage.

INSPECT the shipment immediately upon arrival. The customer is responsible for ensuring that all quantities are correct. The customer should report and note any damage or shortage on the bill of lading to justify their claim to the transport company.

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your equipment and should be easily accessible when needed.

This warranty provides you the assurance that the company will back its products when defects appear within the warranty period. In some circumstances, the company also provides field improvements, often without charge to the customer, even if the product is out of warranty. Should the equipment be abused, or modified to change its performance beyond the factory specifications, the warranty will become void and field improvements may be denied.

## Safety Guidelines

This manual contains information that is important for you, the owner/operator, to know and understand. This information relates to protecting ***personal safety*** and ***preventing equipment problems.*** It is the responsibility of the owner/operator to inform anyone operating or working in the area of this equipment of these safety guidelines. To help you recognize this information, we use the symbols that are defined below. Please read the manual and pay attention to these sections. Failure to read this manual and its safety instructions is a misuse of the equipment and may lead to serious injury or death.

**This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.**

**DANGER** indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

**WARNING** indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

**CAUTION** indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

**CAUTION** used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

**NOTE** indicates information about the equipment that you should pay special attention.

**WARNING! BE ALERT!**

Personnel operating or working around electric fans should read this manual. This manual must be delivered with the equipment to its owner. Failure to read this manual and its safety instructions is a misuse of the equipment.

## Emergency Stop Switch

The emergency stop switch is located on the upper control box door. Pushing the emergency stop switch will interrupt the control power and stop all dryer functions.

> **WARNING** ***Pushing the emergency stop switch does not interrupt the main power to the upper control box panel.***


**Figure 2A**

## Safety Instructions

Our foremost concern is your safety and the safety of others associated with this equipment. We want to keep you as a customer. This manual is to help you understand safe operating procedures and some problems which may be encountered by the operator and other personnel.

As owner and/or operator, it is your responsibility to know what requirements, hazards and precautions exist, and to inform all personnel associated with the equipment or in the area. Safety precautions may be required from the personnel. Avoid any alterations to the equipment. Such alterations may produce a very dangerous situation where SERIOUS INJURY or DEATH may occur.

This equipment shall be installed in accordance with the current installation codes and applicable regulations which should be carefully followed in all cases. Authorities having jurisdiction should be consulted before installations are made.

# Safety Precautions

**READ THESE INSTRUCTIONS BEFORE INSTALLATION AND OPERATION**
**SAVE FOR FUTURE REFERENCE**

1. Read and understand the operating manual before trying to operate the dryer.
2. **NEVER** operate the dryer while the guards are removed.
3. Power supply should be **OFF** for service of electrical components. Use **CAUTION** in checking voltage or other procedures that require the power to be **ON**.
4. Check for gas leaks at all gas pipe connections. If any leaks are detected, **DO NOT** operate dryer. Shut down and repair before further operation.
5. **NEVER** attempt to operate the dryer by jumping or otherwise bypassing any safety devices on the unit.
6. Set pressure regulator to avoid excessive gas pressure to burner during ignition and when burner is in operation. **DO NOT** exceed maximum recommended drying temperature.
7. Keep the dryer clean. Clean grain is easier to dry. Fine material increases resistance to airflow and requires removal of extra moisture. **DO NOT** allow fine material to accumulate in the plenum chamber.
8. Keep auger drive belts tight enough to prevent slippage.
9. Use **CAUTION** in working around high speed fans, gas burners, augers and auxiliary conveyors which can all **START AUTOMATICALLY**.
10. **DO NOT** operate in any area where combustible material will be drawn into the fan.
11. **BEFORE** attempting to remove and reinstall any propeller, read the procedure listed in the service section of the manual.
12. Match the capacities of auxiliary conveyors to dryer auger capacities.

### USE CAUTION IN THE OPERATION OF THIS EQUIPMENT

This dryer is designed and manufactured to maximize operator safety. However, grain dryers have inherently hazardous components: a gas burner, high voltage electrical equipment, high speed rotating parts, etc. It is not possible to fully safeguard against all hazards without impeding efficient operation and reasonable access to components. Therefore, a careful and knowledgeable owner/operator is the best insurance against an accident.

Use extreme caution when working around high speed fans, gas fired heaters, augers and auxiliary conveyers, which may start without warning when the dryer is operating on automatic control.


***Keep the dryer clean. Do not allow fine material to accumulate in the plenum chamber or surrounding the outside of the dryer.***

Continued safe, dependable operation of automatic equipment depends, to a great degree, upon the owner. For a safe and dependable drying system, follow the recommendations within this manual and make it a practice to regularly inspect the operation of the unit for any developing problems or unsafe conditions.

Take special note of all *safety precautions* before attempting to operate the dryer.

# Safety Sign-Off Sheet

As a requirement of O.S.H.A., it is necessary for the employer to train the employee in the safe operating and safety procedures for this auger. This sign-off sheet is provided for your convenience and personal record keeping. All unqualified persons are to stay out of the work area at all times. It is strongly recommended that another qualified person who knows the shut down procedure be in the area in the event of an emergency.

| *Date* | *Employee Name* | *Supervisor Name* |
|---|---|---|
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The GSI Group recommends contacting your local power company and having a representative survey your installation so the wiring is compatible with their system and adequate power is supplied to your unit. Safety decals should be read and understood by all people in the grain handling area.

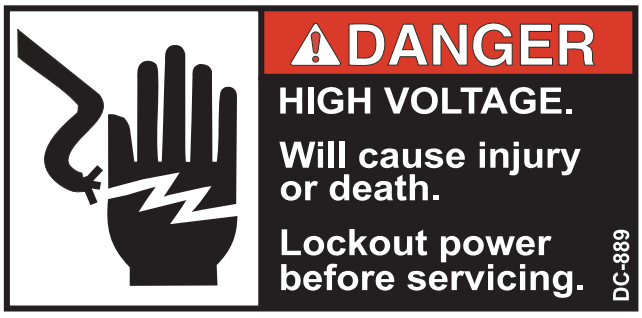
If a decal is damaged or is missing, contact:

**GSI Decals**
1004 E. Illinois St.
Assumption, IL. 62510
Phone: 217-226-4421

A free replacement will be sent to you.

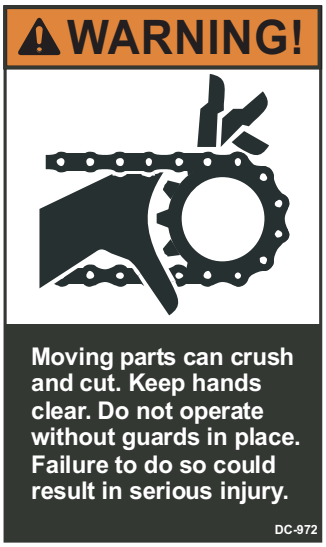

**Decal: DC-1224**

Decal DC-1224 is located in two places on the fan/heater control box. One is located on the lid and another is on the front of the fan/heater control box. An additional location for this decal is inside the upper control box of the dryer.




**Decal: DC-889**

Decal DC-889 has two locations. One is located inside the fan/heater control box and another is on the dryer upper control box door next to the main power disconnect.




**Decal: DC-972**

Decal DC-972 is located on the bottom auger belt guard and the front bearing plate (which is visible when the bottom auger belt guard is removed). An alternate location would be at the rear of the dryer for portable dryers equipped with the **Front Discharge Option**.


**Decal: DC-971**

Decal DC-971 is located on the bottom auger belt guard and the front bearing plate (which is visible when the bottom auger belt guard is removed). An alternate location would be at the rear of the dryer for portable dryers equipped with the **Front Discharge Option**.

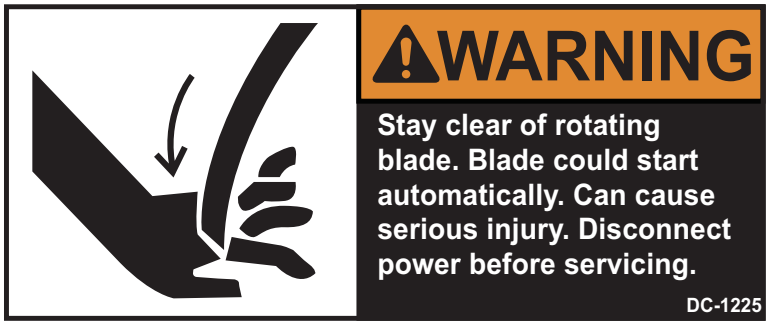
An additional location for decal DC-971 is the top auger belt guard (one on the belt guard cover and one inside on the belt guard body visible when the belt guard cover is removed).


**Decal: DC-974**

Decal DC-974 has several different locations. Two are located on the front end panel below the fan/heater. Two are located on the rear end panel below the rear access door. Two are located on the auger discharge box (one on the outside top and one on the inside of the flapper lid next to the discharge mercury switch). One more of these decals is located inside the plenum on the rear plenum closure door just inside the rear access door.


**Decal: DC-1227**

Decal DC-1227 is located on the fan/heater access door.




**Decal: DC-1225**

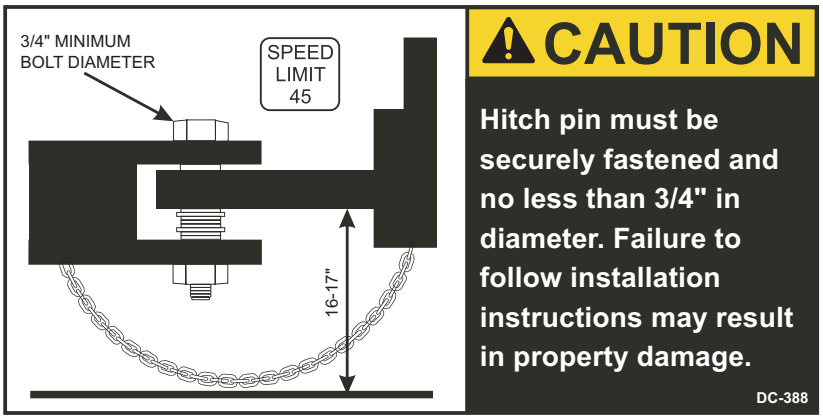
Decal DC-1225 is located on the fan/heater access door.


**Decal: DC-1229**

Decal DC-1229 is located on each of the meter roll access doors.

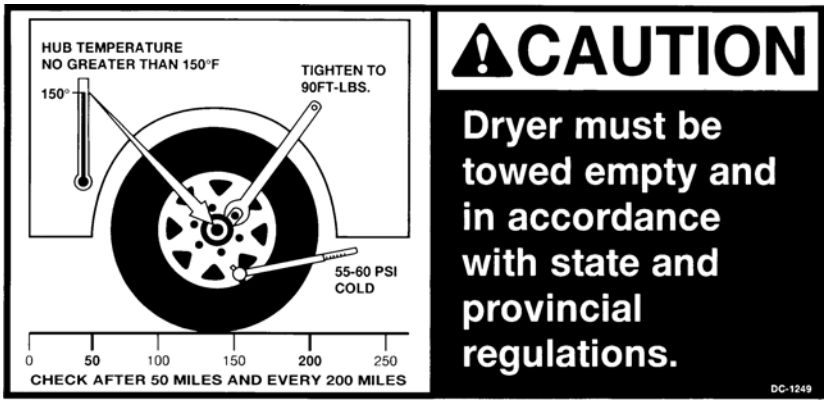

**Decal: DC-973**

Decal DC-973 is located on the rear plenum access door (inside and outside).




**Decal: DC-388**

Decal DC-388 is located on the hitch tongue.




**Decal: DC-1249**

Decal DC-1249 is located on the hitch tongue.

The dryer is available with an optional transport kit for transporting the unit by truck or tractor. Make certain to observe the following safety precautions.

1. Recommended towing hitch height is 14"-17". *(See Figure 4A.)*

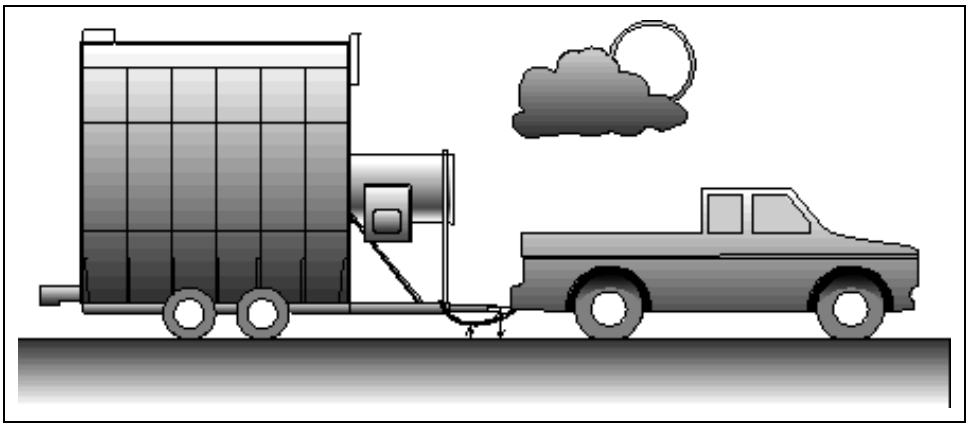


**Figure 4A** *Use a 14"-17" Towing Hitch Height and a Safety Chain*

2. Hitch bolt must be at least *3/4"* in diameter and securely fastened with a locking nut, so it will not come out during travel and the hitch will not bend. *(See Figure 4B.)*

3. Be sure to minimize vertical hitch play with washers. *(See Figure 4B.)*

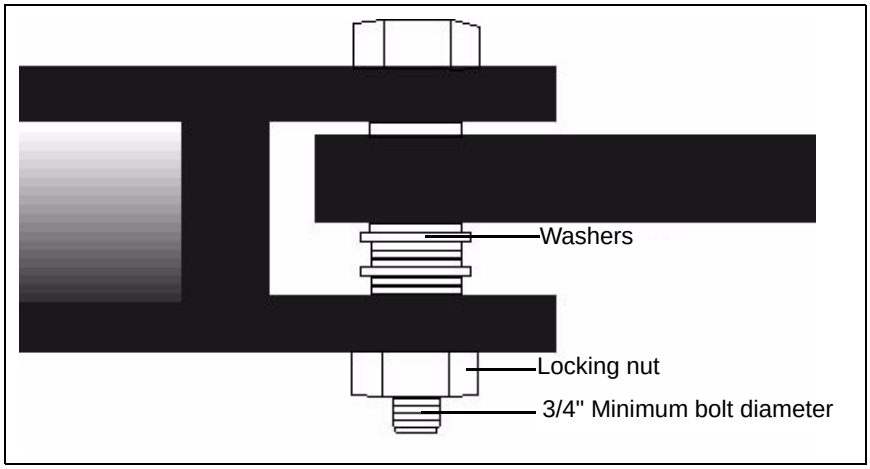



**Figure 4B** *A 3/4" Hitch Bolt and Washers Fastened with a Locking Nut at the Bottom of the Hitch*

4. Always use a safety chain. *(See Figure 4A.)*

5. Dryer must by towed empty and in accordance with applicable state or provincial regulations.

**NOTE:** *NEVER tow dryer with grain or any other material inside of it.*

6. Recommended tire pressure is 55-60 PSI (cold).

7. Maximum towing speed is 45 miles per hour or the speed limit, whichever is *lower*.

8. After the first 50 miles and every 200 miles thereafter, check the following:

   a. Dryer wheel hub and spindle temperature immediately after stopping. Temperature should not exceed 150°F. It may be hot to touch, but not melting lubricant.

   b. Wheel lug nuts. They are factory torqued at 115 to 120 Ft. Lbs. Retighten, if required.

## Location of the Dryer

When considering the exact location of the dryer, also consider the wet grain supply and dry grain discharge, as well as the location of storage bins and other grain handling equipment. Do not install the dryer inside a building or in any other area where not allowed by electrical codes, fuel installation regulations and/or insurance requirements. *Maintain a minimum distance of at least three feet from other structures, otherwise air flow problems may occur. (**See Page 15*.) Do not operate in an area where combustible materials can be drawn into the fans or where load and unload augers can come in contact with power lines.

## Foundation

A reinforced concrete pad or similar permanent foundation is recommended for dryer stability. *See Pages 16* and *17* for details.

## Supporting the Dryer

The wheels are to be used for transporting the dryer only when empty. Before loading any grain into the dryer, the frame of the unit on each side must be supported. Place concrete blocks on each side, every six feet of the frame, as well as at the hitch mount location with the hitch removed. The blocks must be able to support the dryer as well as the additional weight of the grain when full. Use shims to provide uniform, level support for all blocks. The dryer should be at least 16" off the pad to allow for clean-out and the use of auxiliary grain handling equipment. The hitch tongue should be removed, but the hitch assembly and the fan support must be left on during operation; they are not part of the transport tie down assembly.

**NOTE:** *Use a minimum of one (1) support per each six feet of basket length on each side.*

## Supporting the Dryer with the Optional Steel Support Legs

Anchor points may be cast into the concrete slab or the dryer may be tied down by cables and turnbuckles to anchors installed at the edge of the slab. This helps prevent overturn or lateral movement by wind or other forces.

## Wet Grain Supply

A wet grain holding bin provides gravity flow to the dryer or loading conveyor. This conveyor may be electrically connected to the power circuit provided in the main control box. Initially, the dryer will fill completely. During drying, the top auger will start and stop as required depending upon the dry grain discharge rate and grain shrinkage to maintain the dryer fill. If the dryer does not fill within the pre-set time on the Out of Grain Timer (see owner's manual for instructions on setting this timer), the dryer will shut down.

## Dry Grain Removal

The dry grain is normally discharged out of the rear end of the dryer. Front discharge is an optional feature. A take away system needs to be provided to remove grain from the drying system. This conveyor may be electrically connected to the power circuit provided in the main control box.

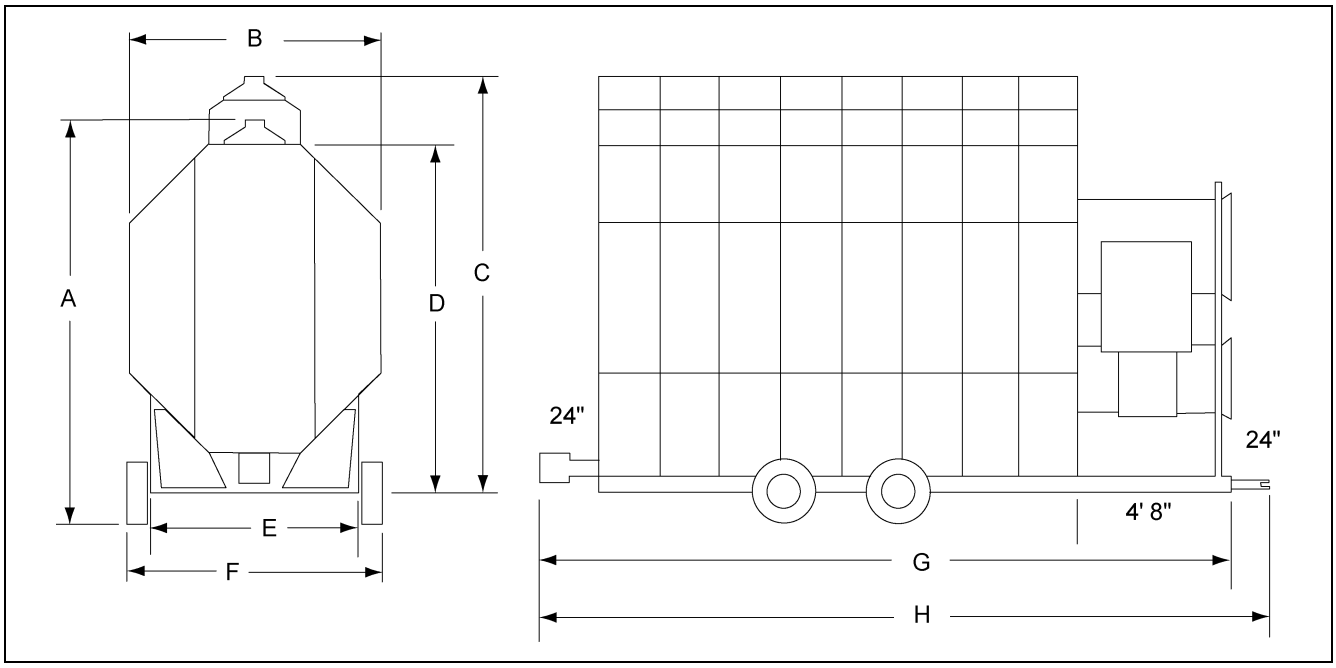



**Figure 5A** *Diagram of Dryer Dimensions*

## Transport and Installation Dimensions

| Driver Model # | A | B | C | | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|
| | Transport Height | Installed Width | Installed Wet Bin | Height Standard | Height w/o Wet Bin | Frame Width | Transport Width | Installed Length | Transport Length |
| 1108 | 11' 6" | 8' | 13' | 11' 8" | 10' 1" | 6' 5" | 8' | 14' 9" | 16' 10" |
| 1110 | 11' 6" | 8' | 13' | 11' 8" | 10' 1" | 6' 5" | 8' | 16' 9" | 18' 10" |
| 1112 | 13' 5" | 8' | 14' 6" | 13' 2" | 11' 7" | 6' 5" | 8' | 18' 9" | 20' 10" |
| 1114 1214 | 13' 5" | 8' | 14' 6" | 13' 2" | 11' 7" | 6' 5" | 8' | 20' 9" | 22' 10" |
| 1116 1216 | 13' 5" | 8' | 14' 6" | 13' 2" | 11' 7" | 6' 5" | 8' | 22' 9" | 24' 10" |
| 1118 1218 | 13' 5" | 8' | 14' 6" | 13' 2" | 11' 7" | 6' 5" | 8' | 24' 9" | 26' 10" |
| 1120 1220 | 13' 5" | 8' | 14' 6" | 13' 2" | 11' 7" | 6' 5" | 8' | 26' 9" | 28' 10" |
| 1122 1222 | 13' 5" | 8' | 14' 6" | 13' 2" | 11' 7" | 6' 5" | 8' | 28' 9" | 30' 10" |
| 1126 1226 | 13' 5" | 8' | 14' 6" | 13' 2" | 11' 7" | 6' 5" | 8' | 32' 9" | 34' 10" |
| 1314 | 13' 5" | 8' | 14' 6" | 13' 2" | 11' 7" | 6' 5" | 8' | 20' 9" | 22' 10" |
| 1318 | 13' 5" | 8' | 14' 6" | 13' 2" | 11' 7" | 6' 5" | 8' | 24' 9" | 26' 10" |
| 1322 | 13' 5" | 8' | 14' 6" | 13' 2" | 11' 7" | 6' 5" | 8' | 28' 9" | 30' 10" |
| 1214S | 13' 5" | 11' 2" | 14' 6" | 13' 2" | 11' 7" | 6' 5" | 8' | 20' 9" | 22' 9" |
| 1218S | 13' 5" | 11' 2" | 14' 6" | 13' 2" | 11' 7" | 6' 5" | 8' | 24' 9" | 26' 10" |
| 1220S | 13' 5" | 11' 2" | 14' 6" | 13' 2" | 11' 7" | 6' 5" | 8' | 26' 9" | 28' 10" |
| 1222S | 13' 5" | 11' 2" | 14' 6" | 13' 2" | 11' 7" | 6' 5" | 8' | 28' 9" | 30' 10" |
| 1226S | 13' 5" | 11' 2" | 14' 6" | 13' 2" | 11' 7" | 6' 5" | 8' | 32' 9" | 34' 10" |
| 160AB | 11' 11" | 8' | N/A | 11' 8" | 10' 1" | 6' 5" | 8' | 12' 9" | 14' 10" |
| 210AB | 11' 11" | 8' | N/A | 11' 8" | 10' 1" | 6' 5" | 8' | 14' 9" | 16' 10" |
| 300AB | 13' 5" | 8' | N/A | 13' 3" | 11' 7" | 6' 5" | 8' | 16' 9" | 18' 10" |
| 375AB | 13' 5" | 8' | N/A | 13' 3" | 11' 7" | 6' 5" | 8' | 18' 9" | 20' 10" |
| 400AB | 13' 5" | 8' | N/A | 13' 3" | 11' 7" | 6' 5" | 8' | 20' 9" | 22' 10" |
| 415AB | 13' 5" | 8' | N/A | 13' 3" | 11' 7" | 6' 5" | 8' | 20' 9" | 22' 10" |
| 600AB | 13' 5" | 8' | N/A | 13' 3" | 11' 7" | 6' 5" | 8' | 26' 9" | 28' 10" |

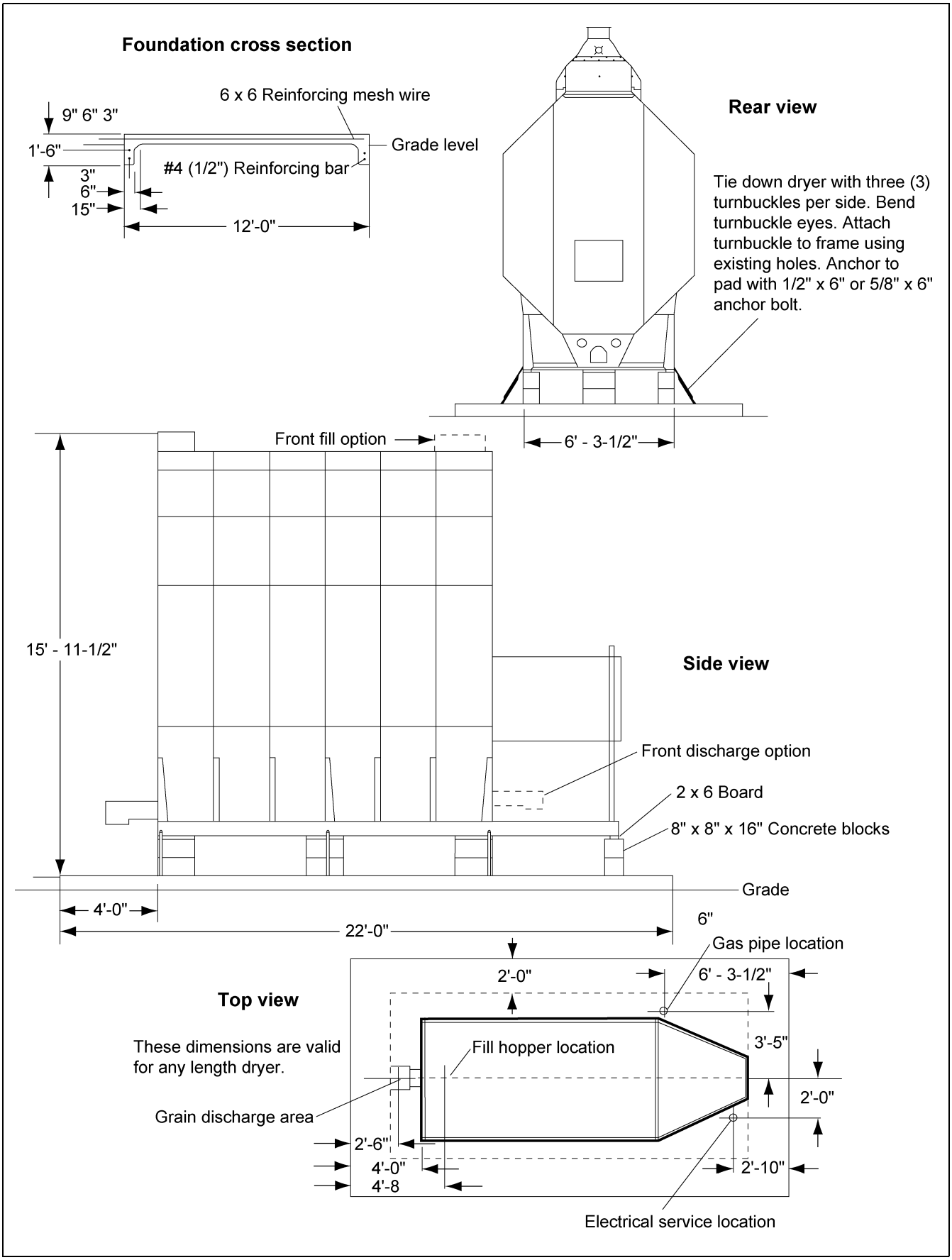

Foundation cross section
6 x 6 Reinforcing mesh wire
9" 6" 3"
1'-6"
Grade level
#4 (1/2") Reinforcing bar
3"
6"
15"
12'-0"
Rear view
Tie down dryer with three (3) turnbuckles per side. Bend turnbuckle eyes. Attach turnbuckle to frame using existing holes. Anchor to pad with 1/2" x 6" or 5/8" x 6" anchor bolt.
6' - 3-1/2"
Front fill option
15' - 11-1/2"
Side view
Front discharge option
2 x 6 Board
8" x 8" x 16" Concrete blocks
Grade
4'-0"
22'-0"
6"
Gas pipe location
Top view
2'-0"
6' - 3-1/2"
These dimensions are valid for any length dryer.
Fill hopper location
3'-5"
2'-0"
Grain discharge area
2'-6"
4'-0"
4'-8
2'-10"
Electrical service location

**Figure 6A**

## Minimum Bag Mix for Concrete Strength per Model Weight

| Dryer Basket Length | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 26 |
|---|---|---|---|---|---|---|---|---|---|---|
| Concrete Pad Size | 12 x 16 | 12 x 18 | 12 x 20 | 12 x 22 | 12 x 24 | 12 x 26 | 12 x 28 | 12 x 30 | 12 x 32 | 12 x 36 |
| Yards Concrete | 5.3 | 5.9 | 6.5 | 7.1 | 7.7 | 8.3 | 8.9 | 9.2 | 10.1 | 11.3 |
| Reinforcing Rods 20" each | 6 | 6 | 7 | 7 | 7 | 8 | 8 | 8 | 9 | 10 |
| Wire Mesh Sq. Ft. | 192 | 216 | 240 | 264 | 288 | 312 | 336 | 360 | 384 | 432 |
| Steel Legs (Minimum) | 8 | 8 | 10 | 10 | 12 | 12 | 14 | 14 | 16 | 18 |
| Anchors | 4 | 4 | 4 | 6 | 6 | 6 | 8 | 8 | 8 | 10 |
| Blocks | 10 | 14 | 14 | 18 | 18 | 18 | 22 | 22 | 26 | 30 |
| Foot of 2 x 6 | 10 | 14 | 14 | 18 | 18 | 18 | 22 | 22 | 26 | 30 |
| Turnbuckles | 4 | 4 | 4 | 6 | 6 | 6 | 8 | 8 | 8 | 10 |
| Estimated Manhours | 8 | 10 | 12 | 14 | 18 | 18 | 20 | 22 | 24 | 28 |

Quantities are approximate and requirements may vary due to site elevations.
Setup times do not include site preparation and pouring concrete pad.

# Liquid Propane (LP)

## Liquid Draw

The dryers have internal vaporizers and are designed to operate on liquid draw from the supply tank. The tank should be 1000 gallons or larger and should not have a regulator mounted to it. The connection to the dryer should be with a flexible hose designed for LP gas, *See chart on Page 20* for proper size. Consult your LP gas dealer for proper fittings, connection hose and safety controls required to meet local standards and to conform with National Fire Protection Association standards. The piping train on the dryer includes strainer, pressure relief valve, electronic safety shut off valve (on some models) and a pressure regulator between the vaporizer and burner.

## Ammonia Tanks

Do not use tanks which have previously been used for ammonia or fertilizer solutions. These substances are extremely corrosive and will damage fuel supply and burner parts.

## Oil or Water in Tanks

With liquid draw from the supply tank, any water or oil present in the tank may freeze in the pipe train or controls causing damage. To make sure the tank is free of moisture, it can be purged with methanol. Avoid tanks which may contain an accumulation of oil or heavy hydrocarbon from long use on a vapor withdrawal system.

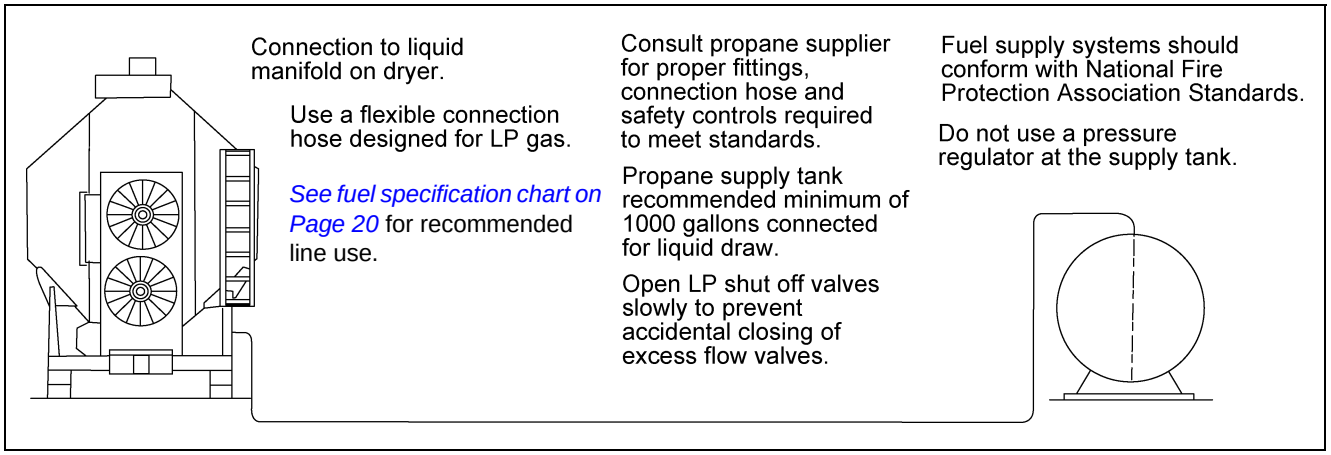



**Figure 8A** *Grain dryer connected to a liquid propane tank.*

### Fuel System Specifications and Recommendations (LP) Liquid Propane

| Dryer Model # | Maximum Heat Capacity BTU Per Hour | Maximum Fuel Flow Gals Per Hour | Fuel Line Size* | Heater Orifice Drill Size |
|---|---|---|---|---|
| 1108 | 3,000,000 | 33 | 1/2" | 1/4" |
| 1110 | 3,500,000 | 38 | 1/2" | 9/32" |
| 1112 | 4,500,000 | 49 | 1/2" | 21/64" |
| 1114 | 5,750,000 | 63 | 1/2" | 11/32" |
| 1116 | 5,750,000 | 63 | 1/2" | 11/32" |
| 1118 | 6,750,000 | 74 | 1/2" | 3/8" |
| 1120 | 7,500,000 | 82 | 1/2" | 25/64" |
| 1122 | 8,750,000 | 96 | 3/4" | 7/16" |
| 1126 | 10,250,000 | 112 | 3/4" | 29/64" |
| 1214 | 6,200,000 | 68 | 3/4" | (U)9/32" (L)7/32" |
| 1216 | 7,200,000 | 79 | 3/4" | (U)21/64" (L)7/32" |
| 1218 | 7,200,000 | 79 | 3/4" | (U)21/64" (L)7/32" |
| 1220 | 8,500,000 | 93 | 3/4" | (U)11/32" (L)1/4" |
| 1222 | 9,750,000 | 107 | 3/4" | (1)3/8" (1)1/4" |
| 1226 | 10,500,000 | 115 | 3/4" | (1)25/64" (1)1/4" |
| 1314 | 8,100,000 | 88 | 3/4" | (3)7/32" |
| 1318 | 8,100,000 | 88 | 3/4" | (3)7/32" |
| 1322 | 8,100,000 | 88 | 3/4" | (3)7/32" |
| 160AB | 3,000,000 | 33 | 1/2" | 1/4" |
| 210AB | 3,500,000 | 33 | 1/2" | 1/4" |
| 300AB | 4,500,000 | 49 | 1/2" | 21/64" |
| 375AB | 5,500,000 | 60 | 1/2" | 21/64" |
| 400AB | 5,500,000 | 60 | 1/2" | 21/64" |
| 415AB | 7,000,000 | 66 | 1/2" | (2)9/32" |
| 600AB | 9,000,000 | 98 | 3/4" | (2)21/64" |

* Maximum line size for a 100' distance.

# Natural Gas (N)

## Gas Volume and Pressure

The dryer is designed to operate on natural gas having a heat value of approximately 1000 BTU per cubic foot. The dryer is equipped with a natural gas supply pipe system connected to the heater solenoid valves. A regulated pressure of 10 PSI must be provided at the connection to the dryer, with gas available in sufficient volume to maintain the operating pressure.

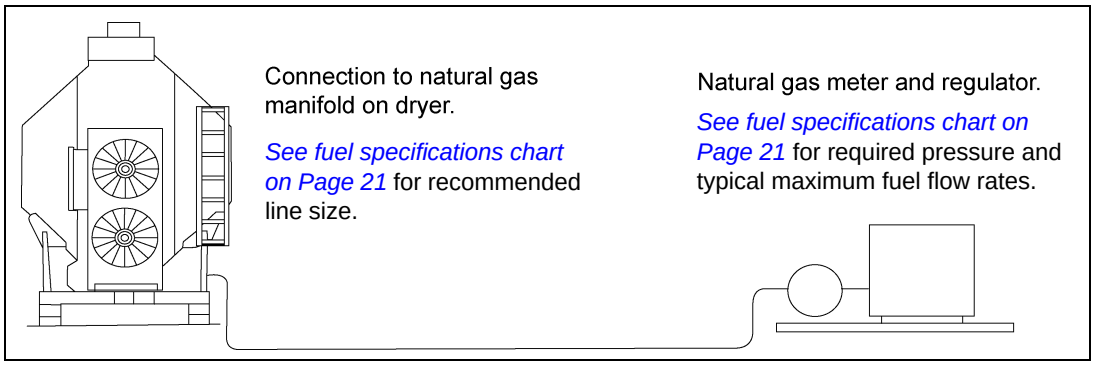



**Figure 8B** *Grain dryer connected to a natural gas supply tank.*

## Fuel System Specifications and Recommendations (N) Natural Gas

| Dryer Model # | Maximum Heat Capacity BTU Per Hour | Maximum Fuel Flow Cubic Feet Per Hour | Fuel Line Size* (Dia.) | Heater Orifice Drill Size |
|---|---|---|---|---|
| 1108 | 3,000,000 | 3,000 | 1-1/4" | 3/8" |
| 1110 | 3,500,000 | 3,500 | 1-1/4" | 13/32" |
| 1112 | 4,500,000 | 4,500 | 1-1/2" | 1/2" |
| 1114 | 5,750,000 | 5,750 | 1-1/2" | 33/64" |
| 1116 | 5,750,000 | 5,750 | 1-1/2" | 33/64" |
| 1118 | 6,750,000 | 6,750 | 2" | 35/64" |
| 1120 | 7,500,000 | 7,500 | 2" | 37/64" |
| 1122 | 8,750,000 | 8,750 | 2" | 19/32" |
| 1126 | 10,250,000 | 10,250 | 2" | 41/64" |
| 1214 | 6,200,000 | 6,200 | 1-1/2" | (1)13/32" (1)5/16" |
| 1216 | 7,200,000 | 7,200 | 2" | (1)1/2" (1)5/16" |
| 1218 | 7,200,000 | 7,200 | 2" | (1)1/2" (1)5/16" |
| 1220 | 8,500,000 | 8,500 | 2" | (1)33/64" (1)3/8" |
| 1222 | 9,750,000 | 9,750 | 2" | (1)35/64" (1)3/8" |
| 1226 | 10,500,000 | 10,500 | 2" | (1)37/64" (1)3/8" |
| 1214S | 6,000,000 | 6,000 | 1-1/2" | (2)3/8" |
| 1218S | 6,000,000 | 6.000 | 1-1/2" | (2)13/32" |
| 1220S | 9,000,000 | 9,000 | 2" | (2)1/2" |
| 1222S | 9,000,000 | 9,000 | 2" | (2)1/2" |
| 1226S | 13,500,000 | 13,500 | 2" | (2)17/32" |
| 1314 | 8,100,000 | 8,100 | 2" | (3)5/16" |
| 1318 | 8,100,000 | 8,100 | 2" | (3)5/16" |
| 1322 | 8,100,000 | 8,100 | 2" | (3)5/16" |
| 160AB | 3,000,000 | 3,000 | 1-1/4" | 3/8" |
| 210AB | 3,500,000 | 3,500 | 1-1/4" | 13/32" |
| 300AB | 4.500,000 | 4,500 | 1-1/2" | 1/2" |
| 375AB | 5,500,000 | 5,500 | 1-1/2" | 33/64" |
| 400AB | 5,500,000 | 5,500 | 1-1/2" | 33/64" |
| 415AB | 7,000,000 | 7,000 | 2" | (2)13/32" |
| 600AB | 9,000,000 | 9,000 | 2" | (2)1/2" |

* Maximum line size for a 100' distance.


**Figure 8C** *The fuel connection point is equipped with a Y-strainer and Maxon safety valve.*

## Power Supply

An adequate power supply and proper wiring are important factors for maximum performance and long life of the dryer. Electrical service must be adequate to prevent low voltage damage to motors and control circuits. *(See Electrical Load Information on Pages 23-30)*. Power supply for single phase models must include a neutral wire.

## Transformers and Wiring Voltage Drop

Advise the service representative of the local power supplier that an additional load will be placed on the line. Check the KVA rating of transformers, considering total horsepower load. The power supply wiring, main switch equipment and transformers must provide adequate motor starting and operating voltage. Voltage drop during motor starting should not exceed 14% of normal voltage. After motor is running at full speed, it should be within 8% of normal voltage. Check electrical load information *(See Pages 24-30)* for HP ratings and maximum amp loads.

## Power Supply Disconnect

All dryers are equipped with a power disconnect switch in the power box to permit total power shut down before opening the power box door, as required for inspection and service. The power disconnect switch is located on the power box door for quick shut down.

## Machine to Earth Grounding

A *Machine to Earth Ground Rod* must be installed at the dryer. Place the ground rod that comes standard within eight feet of the dryer and attach it to the dryer control panel with at least a #6 solid, bare, copper ground wire and the clamp provided. The grounding rod located at the power pole will not provide adequate grounding for the dryer. Proper grounding will provide additional safety in case of any short and will ensure long life of all circuit boards, the SCR drive and the ignition system. The ground rod must be in accordance with local requirements.

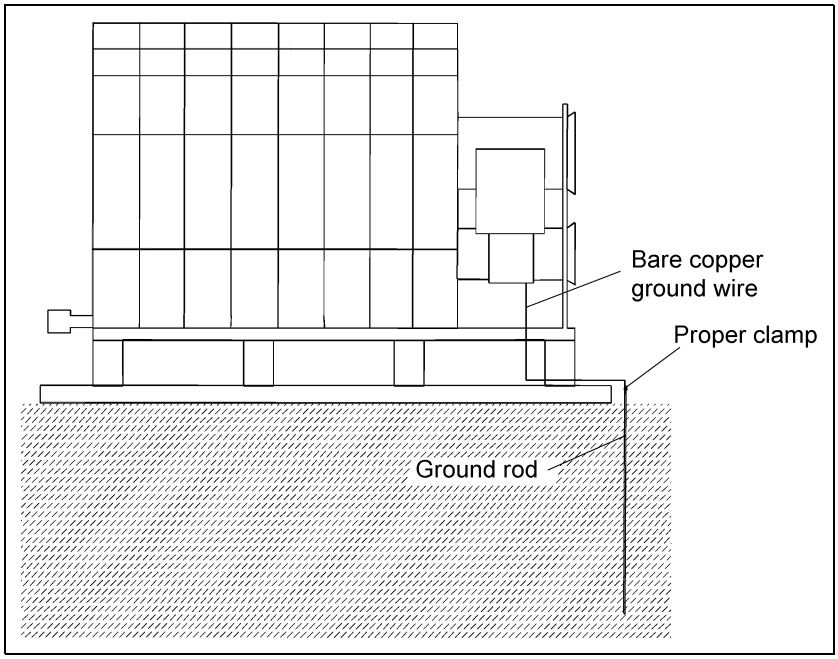



**Figure 9A** *Installation of a ground rod (standard with dryer purchase) specifically for the grain dryer is necessary for safety and equipment preservation.*

## Proper Installation of Ground Rod

The rod should not be driven into dry ground. Follow these instructions for proper installation.

1. Dig a hole large enough to hold one (1) to two (2) gallons of water.
2. Fill hole with water.
3. Insert rod through water and “jab” it into the ground.
4. Continue “jabbing” the rod up and down. This allows the water to work its way into the ground, allowing it to be completely inserted into the ground. This method of installation also assures good contact with the surrounding soil, thereby making a proper ground.
5. Connect the bare, copper ground wire to the rod with the proper clamp.
6. Connect ground wire to control panel with the ground lug provided in the control box.
7. Ground wire must not have any breaks or splices. Do not use insulated wire for grounding applications.

## Connecting Auxiliary Conveyors

The auxiliary load and auxiliary unload augers or conveyors can be wired directly to the dryer. Electrical Load Information on *Pages 23-31* shows the maximum horse power and amps of auxiliaries that can be wired to the dryer. If an auxiliary motor is larger than recommended, it must be powered from a source outside the dryer and must use a separate contactor and overload protection device for each motor. However, the operation of the auxiliaries can be performed by the control panel.

*The following charts* provide information for the electrician wiring the grain dryer and are a reference guide for parts. You should contact the local power company and have a representative survey the installation to see that the wiring is compatible with their system and that adequate power is supplied to the unit. Remember that the only thing connected to the recommended service amps should be the grain dryer.

Adhere to all electrical safety practices and codes. (Refer to the National Electrical Code Standard handbook by the National Fire Protection Association). A qualified electrician must make all electrical wiring installations.

| Dryer Model # | Voltage | Motor | HP | Fuel Load Amps | Maximum Amps with Auxiliaries | Minimum Amps | Recommended Service in Amps | Branch Breaker in Amps |
|---|---|---|---|---|---|---|---|---|
| 1108 | 1 PH 230V | Top Auger | 1.5 | 8 | 153 | 62.5 | 200 | 60 |
| | | Bottom Auger | 1 | 6.5 | | | | 60 |
| | | Fan | 10 to 12 | 48 | | | | 100 |
| | | (2) Auxiliary | (2) 7.5 | 62 | | | | * |
| | 3 PH 220V | Top Auger | 1.5 | 5 | 104 | 41.4 | 150 | 50 |
| | | Bottom Auger | 1 | 3.4 | | | | 50 |
| | | Fan | 10 to 12 | 33 | | | | 60 |
| | | (2) Auxiliary | (2) 7.5 | 40 | | | | * |
| | 3 PH 440V | Top Auger | 1.5 | 2.5 | 57 | 20.7 | 150 | 60 |
| | | Bottom Auger | 1 | 1.7 | | | | 60 |
| | | Fan | 10 to 12 | 16.5 | | | | 60 |
| | | (2) Auxiliary | (2) 7.5 | 20 | | | | * |
| 1110 | 1 PH 230V | Top Auger | 2 | 14 | 162 | 70 | 225 | 60 |
| | | Bottom Auger | 1.5 | 8 | | | | 60 |
| | | Fan | 10 to 12 | 48 | | | | 100 |
| | | (2) Auxiliary | (2) 7.5 | 62 | | | | * |
| | 3 PH 220V | Top Auger | 2 | 6.2 | 101 | 39.2 | 150 | 50 |
| | | Bottom Auger | 1.5 | 5 | | | | 50 |
| | | Fan | 10 | 28 | | | | 60 |
| | | (2) Auxiliary | (2) 7.5 | 40 | | | | * |
| | 3 PH 440V | Top Auger | 2 | 3.1 | 56 | 19.6 | 150 | 60 |
| | | Bottom Auger | 1.5 | 2.5 | | | | 60 |
| | | Fan | 10 | 14 | | | | 60 |
| | | (2) Auxiliary | (2) 7.5 | 20 | | | | * |
| 1112 | 1 PH 230V | Top Auger | 2 | 14 | 196 | 100 | 300 | 60 |
| | | Bottom Auger | 1.5 | 8 | | | | 60 |
| | | Fan | 10 to 17 | 78 | | | | 100 |
| | | (2) Auxiliary | (2) 7.5 | 62 | | | | * |
| | 3 PH 220V | Top Auger | 2 | 6.2 | 114 | 50.2 | 175 | 50 |
| | | Bottom Auger | 1.5 | 5 | | | | 50 |
| | | Fan | 15 | 39 | | | | 60 |
| | | (2) Auxiliary | (2) 7.5 | 40 | | | | * |
| | 3 PH 440V | Top Auger | 2 | 3.1 | 62 | 25.1 | 150 | 60 |
| | | Bottom Auger | 1.5 | 2.5 | | | | 60 |
| | | Fan | 15 | 19.5 | | | | 60 |
| | | (2) Auxiliary | (2) 7.5 | 20 | | | | * |

*Auxiliaries run through load and unload breakers.
Subject to change without notification.

## 10. Electrical Load Information

| Dryer Model # | Voltage | Motor | HP | Fuel Load Amps | Maximum Amps with Auxiliaries | Minimum Amps | Recommended Service in Amps | Branch Breaker in Amps |
|---|---|---|---|---|---|---|---|---|
| 1114 | 1 PH 230V | Top Auger | 5 | 26 | 231 | 130 | 350 | 100 |
| | | Bottom Auger | 5 | 26 | | | | 100 |
| | | Fan | 10 to 17 | 78 | | | | 100 |
| | | (2) Auxiliary | (2) 7.5 | 62 | | | | * |
| | 3 PH 220V | Top Auger | 5 | 13.2 | 145 | 65.4 | 200 | 60 |
| | | Bottom Auger | 5 | 13.2 | | | | 60 |
| | | Fan | 15 | 39 | | | | 60 |
| | | (2) Auxiliary | (2) 10 | 52 | | | | * |
| | 3 PH 440V | Top Auger | 5 | 6.6 | 78 | 32.7 | 150 | 60 |
| | | Bottom Auger | 5 | 6.6 | | | | 60 |
| | | Fan | 15 | 19.5 | | | | 60 |
| | | (2) Auxiliary | (2) 10 | 26 | | | | * |
| 1116 | 1 PH 230V | Top Auger | 5 | 26 | 231 | 130 | 350 | 100 |
| | | Bottom Auger | 5 | 26 | | | | 100 |
| | | Fan | 10 to 17 | 78 | | | | 100 |
| | | (2) Auxiliary | (2) 7.5 | 62 | | | | * |
| | 3 PH 220V | Top Auger | 5 | 13.2 | 145 | 65.4 | 200 | 60 |
| | | Bottom Auger | 5 | 13.2 | | | | 60 |
| | | Fan | 15 | 39 | | | | 60 |
| | | (2) Auxiliary | (2) 10 | 52 | | | | * |
| | 3 PH 440V | Top Auger | 5 | 6.6 | 78 | 32.7 | 150 | 60 |
| | | Bottom Auger | 5 | 6.6 | | | | 60 |
| | | Fan | 15 | 19.5 | | | | 60 |
| | | (2) Auxiliary | (2) 10 | 26 | | | | * |
| 1118 | 3 PH 220V | Top Auger | 5 | 13.2 | 158 | 76.4 | 250 | 60 |
| | | Bottom Auger | 5 | 13.2 | | | | 60 |
| | | Fan | 20 | 50 | | | | 90 |
| | | (2) Auxiliary | (2) 10 | 52 | | | | * |
| | 3 PH 440V | Top Auger | 5 | 6.6 | 84 | 38.2 | 150 | 60 |
| | | Bottom Auger | 5 | 6.6 | | | | 60 |
| | | Fan | 20 | 25 | | | | 60 |
| | | (2) Auxiliary | (2) 10 | 26 | | | | * |
| 1120 | 3 PH 220V | Top Auger | 7.5 | 20 | 219 | 104 | 300 | 90 |
| | | Bottom Auger | 7.5 | 20 | | | | 90 |
| | | Fan | 25 | 64 | | | | 90 |
| | | (2) Auxiliary | (2) 15 | 78 | | | | * |
| | 3 PH 440V | Top Auger | 7.5 | 10 | 115 | 52 | 200 | 60 |
| | | Bottom Auger | 7.5 | 10 | | | | 60 |
| | | Fan | 25 | 32 | | | | 60 |
| | | (2) Auxiliary | (2) 15 | 39 | | | | * |
| 1122 | 3 PH 220V | Top Auger | 7.5 | 20 | 231 | 114 | 300 | 90 |
| | | Bottom Auger | 7.5 | 20 | | | | 90 |
| | | Fan | 30 | 74 | | | | 90 |
| | | (2) Auxiliary | (2) 15 | 78 | | | | * |
| | 3 PH 440V | Top Auger | 7.5 | 10 | 120 | 57 | 200 | 60 |
| | | Bottom Auger | 7.5 | 10 | | | | 60 |
| | | Fan | 30 | 37 | | | | 60 |
| | | (2) Auxiliary | (2) 15 | 39 | | | | * |

*Auxiliaries run through load and unload breakers.

| Dryer Model # | Voltage | Motor | HP | Fuel Load Amps | Maximum Amps with Auxiliaries | Minimum Amps | Recommended Service in Amps | Branch Breaker in Amps |
|---|---|---|---|---|---|---|---|---|
| 1126 | 3 PH 220V | Top Auger | 10 | 26 | 277 | 154 | 400 | 90 |
| | | Bottom Auger | 10 | 26 | | | | 90 |
| | | Fan | 40 | 102 | | | | 125 |
| | | (2) Auxiliary | (2) 15 | 78 | | | | * |
| | 3 PH 440V | Top Auger | 10 | 13 | 143 | 77 | 250 | 60 |
| | | Bottom Auger | 10 | 13 | | | | 60 |
| | | Fan | 40 | 51 | | | | 90 |
| | | (2) Auxiliary | (2) 15 | 39l | | | | * |
| 1214 | 1 PH 230V | Top Auger | 5 | 26 | 252 | 148 | 300 | 100 |
| | | Bottom Auger | 5 | 26 | | | | 100 |
| | | Top Fan | 10 to 12 | 48 | | | | 100 |
| | | Bottom Fan | 10 to 12 | 48 | | | | 100 |
| | | (2) Auxiliary | (2) 7.5 | 62 | | | | * |
| | 3 PH 220V | Top Auger | 5 | 13.2 | 170 | 87.4 | 225 | 60 |
| | | Bottom Auger | 5 | 13.2 | | | | 60 |
| | | Top Fan | 10 | 28 | | | | 60 |
| | | Bottom Fan | 10 to 12 | 33 | | | | 60 |
| | | (2) Auxiliary | (2) 10 | 52 | | | | * |
| | 3 PH 440V | Top Auger | 5 | 6.6 | 90 | 43.7 | 150 | 60 |
| | | Bottom Auger | 5 | 6.6 | | | | 60 |
| | | Top Fan | 10 | 14 | | | | 60 |
| | | Bottom Fan | 10 to 12 | 16.5 | | | | 60 |
| | | (2) Auxiliary | (2) 10 | 26 | | | | * |
| 1216 | 1 PH 230V | Top Auger | 5 | 26 | 286 | 178 | 400 | 100 |
| | | Bottom Auger | 5 | 26 | | | | 100 |
| | | Top Fan | 10 to 17 | 78 | | | | 100 |
| | | Bottom Fan | 10 to 12 | 48 | | | | 100 |
| | | (2) Auxiliary | (2) 7.5 | 62 | | | | * |
| | 3 PH 220V | Top Auger | 5 | 13.2 | 183 | 98.4 | 225 | 60 |
| | | Bottom Auger | 5 | 13.2 | | | | 60 |
| | | Top Fan | 15 | 39 | | | | 60 |
| | | Bottom Fan | 10 to 12 | 33 | | | | 60 |
| | | (2) Auxiliary | (2) 10 | 52 | | | | * |
| | 3 PH 440V | Top Auger | 5 | 6.6 | 96 | 49.2 | 150 | 60 |
| | | Bottom Auger | 5 | 6.6 | | | | 60 |
| | | Top Fan | 15 | 19.5 | | | | 60 |
| | | Bottom Fan | 10 to 12 | 16.5 | | | | 60 |
| | | (2) Auxiliary | (2) 10 | 26 | | | | * |

*Auxiliaries run through load and unload breakers.

| Dryer Model # | Voltage | Motor | HP | Fuel Load Amps | Maximum Amps with Auxiliaries | Minimum Amps | Recommended Service in Amps | Branch Breaker in Amps |
|---|---|---|---|---|---|---|---|---|
| 1218 | 1 PH 230V | Top Auger | 5 | 26 | 286 | 178 | 400 | 100 |
| | | Bottom Auger | 5 | 26 | | | | 100 |
| | | Top Fan | 10 to 17 | 78 | | | | 100 |
| | | Bottom Fan | 10 to 12 | 48 | | | | 100 |
| | | (2) Auxiliary | (2) 7.5 | 62 | | | | * |
| | 3 PH 220V | Top Auger | 5 | 13.2 | 183 | 98.4 | 225 | 60 |
| | | Bottom Auger | 5 | 13.2 | | | | 60 |
| | | Top Fan | 15 | 39 | | | | 60 |
| | | Bottom Fan | 10 to 12 | 33 | | | | 60 |
| | | (2) Auxiliary | (2) 10 | 52 | | | | * |
| | 3 PH 440V | Top Auger | 5 | 6.6 | 96 | 49.2 | 150 | 60 |
| | | Bottom Auger | 5 | 6.6 | | | | 60 |
| | | Top Fan | 15 | 19.5 | | | | 60 |
| | | Bottom Fan | 10 to 12 | 16.5 | | | | 60 |
| | | (2) Auxiliary | (2) 10 | 26 | | | | * |
| 1220 | 1 PH 230V | Top Auger | 7.5 | 31 | 298 | 188 | 400 | 100 |
| | | Bottom Auger | 7.5 | 31 | | | | 100 |
| | | Top Fan | 10 to 17 | 78 | | | | 100 |
| | | Bottom Fan | 10 to 12 | 48 | | | | 100 |
| | | (2) Auxiliary | (2) 7.5 | 62 | | | | * |
| | 3 PH 220V | Top Auger | 7.5 | 20 | 229 | 112 | 300 | 90 |
| | | Bottom Auger | 7.5 | 20 | | | | 90 |
| | | Top Fan | 15 | 39 | | | | 60 |
| | | Bottom Fan | 10 to12 | 33 | | | | 60 |
| | | (2) Auxiliary | (2) 15 | 78 | | | | * |
| | 3 PH 440V | Top Auger | 7.5 | 10 | 123 | 59 | 200 | 60 |
| | | Bottom Auger | 7.5 | 10 | | | | 60 |
| | | Top Fan | 15 | 19.5 | | | | 60 |
| | | Bottom Fan | 10 to 12 | 16.5 | | | | 60 |
| | | (2) Auxiliary | (2) 15 | 39 | | | | * |
| 1222 | 3 PH 220V | Top Auger | 7.5 | 20 | 241 | 123 | 350 | 90 |
| | | Bottom Auger | 7.5 | 20 | | | | 90 |
| | | Top Fan | 20 | 50 | | | | 90 |
| | | Bottom Fan | 10 to 12 | 33 | | | | 60 |
| | | (2) Auxiliary | (2) 15 | 78 | | | | * |
| | 3 PH 440V | Top Auger | 7.5 | 10 | 129 | 64.5 | 200 | 60 |
| | | Bottom Auger | 7.5 | 10 | | | | 60 |
| | | Top Fan | 20 | 25 | | | | 60 |
| | | Bottom Fan | 10 to 12 | 16.5 | | | | 60 |
| | | (2) Auxiliary | (2) 15 | 39 | | | | * |
| 1226 | 3 PH 220V | Top Auger | 10 | 26 | 271 | 149 | 350 | 90 |
| | | Bottom Auger | 10 | 26 | | | | 90 |
| | | Top Fan | 25 | 64 | | | | 90 |
| | | Bottom Fan | 10 to 12 | 33 | | | | 60 |
| | | (2) Auxiliary | (2) 15 | 78 | | | | * |
| | 3 PH 440V | Top Auger | 10 | 13 | 144 | 77.5 | 200 | 60 |
| | | Bottom Auger | 10 | 13 | | | | 60 |
| | | Top Fan | 25 | 32 | | | | 60 |
| | | Bottom Fan | 10 to 12 | 16.5 | | | | 60 |
| | | (2) Auxiliary | (2) 15 | 39 | | | | * |

*Auxiliaries run through load and unload breakers.

| Dryer Model # | Voltage | Motor | HP | Fuel Load Amps | Maximum Amps with Auxiliaries | Minimum Amps | Recommended Service in Amps | Branch Breaker in Amps |
|---|---|---|---|---|---|---|---|---|
| 1214S | 1 PH 230V | Top Auger | 5 | 26 | 252 | 148 | 350 | C303B 100 |
| | | Bottom Auger | 5 | 26 | | | | C303B 100 |
| | | (2) Fans | (2) 10 to 12 | 96 | | | | F614B 100 |
| | | (2) Auxiliary | (2) 7.5 | 62 | | | | C330B * |
| | 3 PH 220V | Top Auger | 5 | 13.2 | 176 | 92.4 | 225 | C163B 60 |
| | | Bottom Auger | 5 | 13.2 | | | | C163B 60 |
| | | (2) Fans | (2) 10 to 12 | 66 | | | | C366B 60 |
| | | (2) Auxiliary | (2) 10 | 52 | | | | C303B * |
| | 3 PH 440V | Top Auger | 5 | 6.6 | 93 | 46.2 | 150 | C867A 60 |
| | | Bottom Auger | 5 | 6.6 | | | | C867A 60 |
| | | (2) Fans | (2) 10 to 12 | 33 | | | | C180B 60 |
| | | (2) Auxiliary | (2) 10 | 26 | | | | C163B * |
| 1218S | 1 PH 230V | Top Auger | 5 | 26 | 252 | 148 | 350 | 100 |
| | | Bottom Auger | 5 | 26 | | | | 100 |
| | | (2) Fans | (2) 10 to 12 | 96 | | | | 100 |
| | | (2) Auxiliary | (2) 7.5 | 62 | | | | * |
| | 3 PH 220V | Top Auger | 5 | 13.2 | 165 | 82.4 | 225 | 60 |
| | | Bottom Auger | 5 | 13.2 | | | | 60 |
| | | (2) Fans | (2) 10 | 56 | | | | 60 |
| | | (2) Auxiliary | (2) 10 | 52 | | | | * |
| | 3 PH 440V | Top Auger | 5 | 6.6 | 87 | 41.2 | 150 | 60 |
| | | Bottom Auger | 5 | 6.6 | | | | 60 |
| | | (2) Fans | (2) 10 | 28 | | | | 60 |
| | | (2) Auxiliary | (2) 10 | 26 | | | | * |
| 1220S | 1 PH 230V | Top Auger | 7.5 | 31 | 332 | 218 | 400 | 100 |
| | | Bottom Auger | 7.5 | 31 | | | | 100 |
| | | (2) Fans | (2) 10 to 17 | 156 | | | | 100 |
| | | (2) Auxiliary | (2) 7.5 | 62 | | | | * |
| | 3 PH 220V | Top Auger | 7.5 | 20 | 235 | 118 | 300 | 90 |
| | | Bottom Auger | 7.5 | 20 | | | | 90 |
| | | (2) Fans | (2) 15 | 78 | | | | 60 |
| | | (2) Auxiliary | (2) 15 | 78 | | | | * |
| | 3 PH 440V | Top Auger | 7.5 | 10 | 123 | 59 | 200 | 60 |
| | | Bottom Auger | 7.5 | 10 | | | | 60 |
| | | (2) Fans | (2) 15 | 39 | | | | 60 |
| | | (2) Auxiliary | (2) 15 | 39 | | | | * |
| 1222S | 1 PH 230V | Top Auger | 7.5 | 31 | 332 | 218 | 400 | 100 |
| | | Bottom Auger | 7.5 | 31 | | | | 100 |
| | | (2) Fans | (2) 10 to 17 | 156 | | | | 100 |
| | | (2) Auxiliary | (2) 7.5 | 62 | | | | * |
| | 3 PH 220V | Top Auger | 7.5 | 20 | 235 | 118 | 300 | 90 |
| | | Bottom Auger | 7.5 | 20 | | | | 90 |
| | | (2) Fans | (2) 15 | 78 | | | | 60 |
| | | (2) Auxiliary | (2) 15 | 78 | | | | * |
| | 3 PH 440V | Top Auger | 7.5 | 10 | 123 | 59 | 200 | 60 |
| | | Bottom Auger | 7.5 | 10 | | | | 60 |
| | | (2) Fans | (2) 15 | 39 | | | | 60 |
| | | (2) Auxiliary | (2) 15 | 39 | | | | * |

*Auxiliaries run through load and unload breakers.

# 10. Electrical Load Information

| Dryer Model # | Voltage | Motor | HP | Fuel Load Amps | Maximum Amps with Auxiliaries | Minimum Amps | Recommended Service in Amps | Branch Breaker in Amps |
|---|---|---|---|---|---|---|---|---|
| 1226S | 3 PH 220V | Top Auger | 10 | 26 | 307 | 180 | 400 | 90 |
| | | Bottom Auger | 10 | 26 | | | | 90 |
| | | (2) Fans | (2) 25 | 128 | | | | 90 |
| | | (2) Auxiliary | (2) 15 | 78 | | | | * |
| | 3 PH 440V | Top Auger | 10 | 13 | 158 | 90 | 200 | 60 |
| | | Bottom Auger | 10 | 13 | | | | 60 |
| | | (2) Fans | (2) 25 | 64 | | | | 60 |
| | | (2) Auxiliary | (2) 15 | 39 | | | | * |
| 1314<br>1318 | 1 PH 230V | Top Auger | 5 | 26 | 307 | 196 | 400 | 100 |
| | | Bottom Auger | 5 | 26 | | | | 100 |
| | | Top Fan | 10 to 12 | 48 | | | | 100 |
| | | Mid.Fan | 10 to 12 | 48 | | | | 100 |
| | | Bottom Fan | 10 to 12 | 48 | | | | 100 |
| | | (2) Auxiliary | (2) 7.5 | 62 | | | | * |
| | 3 PH 220V | Top Auger | 5 | 13.2 | 214 | 125.4 | 250 | 60 |
| | | Bottom Auger | 5 | 13.2 | | | | 60 |
| | | Top Fan | 10 to 12 | 33 | | | | 60 |
| | | Mid.Fan | 10 to 12 | 33 | | | | 60 |
| | | Bottom Fan | 10 to 12 | 33 | | | | 60 |
| | | (2) Auxiliary | (2) 10 | 52 | | | | * |
| | 3 PH 440V | Top Auger | 5 | 6.6 | 112 | 62.7 | 200 | 60 |
| | | Bottom Auger | 5 | 6.6 | | | | 60 |
| | | Top Fan | 10 to 12 | 16.5 | | | | 60 |
| | | Mid.Fan | 10 to 12 | 16.5 | | | | 60 |
| | | Bottom Fan | 10 to 12 | 16.5 | | | | 60 |
| | | (2) Auxiliary | (2) 10 | 26 | | | | * |
| 1322 | 1 PH 230V | Top Auger | 7.5 | 31 | 318 | 206 | 400 | 100 |
| | | Bottom Auger | 7.5 | 31 | | | | 100 |
| | | Top Fan | 10 to 12 | 48 | | | | 100 |
| | | Mid.Fan | 10 to 12 | 48 | | | | 100 |
| | | Bottom Fan | 10 to 12 | 48 | | | | 100 |
| | | (2) Auxiliary | (2) 7.5 | 62 | | | | * |
| | 3 PH 220V | Top Auger | 7.5 | 20 | 260 | 139 | 350 | 90 |
| | | Bottom Auger | 7.5 | 20 | | | | 90 |
| | | Top Fan | 10 to 12 | 33 | | | | 60 |
| | | Mid.Fan | 10 to 12 | 33 | | | | 60 |
| | | Bottom Fan | 10 to 12 | 33 | | | | 60 |
| | | (2) Auxiliary | (2) 15 | 78 | | | | * |
| | 3 PH 440V | Top Auger | 7.5 | 10 | 135 | 69.5 | 200 | 60 |
| | | Bottom Auger | 7.5 | 10 | | | | 60 |
| | | Top Fan | 10 to 12 | 16.5 | | | | 60 |
| | | Mid.Fan | 10 to 12 | 16.5 | | | | 60 |
| | | Bottom Fan | 10 to 12 | 16.5 | | | | 60 |
| | | (2) Auxiliary | (2) 15 | 39 | | | | * |

*Auxiliaries run through load and unload breakers.

| Dryer Model # | Voltage | Motor | HP | Fuel Load Amps | Maximum Amps with Auxiliaries | Minimum Amps | Recommended Service in Amps | Branch Breaker in Amps |
|---|---|---|---|---|---|---|---|---|
| 160AB | 1 PH 230V | Top Auger | 1 | 6.5 | 151 | 61 | 200 | 50 |
| | | Bottom Auger | 1 | 6.5 | | | | 50 |
| | | Fan | 10 to 12 | 48 | | | | 60 |
| | | (2) Auxiliary | (2) 7.5 | 62 | | | | * |
| | 3 PH 220V | Top Auger | 1 | 3.4 | 102 | 39.8 | 150 | 60 |
| | | Bottom Auger | 1 | 3.4 | | | | 60 |
| | | Fan | 10 to 12 | 33 | | | | 60 |
| | | (2) Auxiliary | (2) 7.5 | 40 | | | | * |
| | 3 PH 440V | Top Auger | 1 | 1.7 | 56 | 19.9 | 150 | 60 |
| | | Bottom Auger | 1 | 1.7 | | | | 60 |
| | | Fan | 10 to 12 | 16.5 | | | | 60 |
| | | (2) Auxiliary | (2) 7.5 | 20 | | | | * |
| 210AB | 1 PH 230V | Top Auger | 2 | 14 | 169 | 76 | 225 | 60 |
| | | Bottom Auger | 2 | 14 | | | | 60 |
| | | Fan | 10 to 12 | 48 | | | | 100 |
| | | (2) Auxiliary | (2) 7.5 | 62 | | | | * |
| | 3 PH 220V | Top Auger | 2 | 6.2 | 102 | 40.4 | 150 | 50 |
| | | Bottom Auger | 2 | 6.2 | | | | 50 |
| | | Fan | 10 | 28 | | | | 60 |
| | | (2) Auxiliary | (2) 7.5 | 40 | | | | * |
| | 3 PH 440V | Top Auger | 2 | 3.1 | 56 | 20.2 | 150 | 60 |
| | | Bottom Auger | 2 | 3.1 | | | | 60 |
| | | Fan | 10 | 14 | | | | 60 |
| | | (2) Auxiliary | (2) 7.5 | 20 | | | | * |
| 300AB | 1 PH 230V | Top Auger | 3 | 17.7 | 212 | 113.4 | 300 | 60 |
| | | Bottom Auger | 3 | 17.7 | | | | 60 |
| | | Fan | 10 to 17 | 78 | | | | 100 |
| | | (2) Auxiliary | (2) 7.5 | 62 | | | | * |
| | 3 PH 220V | Top Auger | 3 | 8.6 | 121 | 56.2 | 175 | 60 |
| | | Bottom Auger | 3 | 8.6 | | | | 60 |
| | | Fan | 15 | 39 | | | | 60 |
| | | (2) Auxiliary | (2) 7.5 | 40 | | | | * |
| | 3 PH 440V | Top Auger | 3 | 4.3 | 65 | 28.1 | 150 | 60 |
| | | Bottom Auger | 3 | 4.3 | | | | 60 |
| | | Fan | 15 | 19.5 | | | | 60 |
| | | (2) Auxiliary | (2) 7.5 | 20 | | | | * |
| 375AB | 1 PH 230V | Top Auger | 3 | 17.7 | 212 | 113.4 | 300 | 60 |
| | | Bottom Auger | 3 | 17.7 | | | | 60 |
| | | Fan | 10 to 17 | 78 | | | | 100 |
| | | (2) Auxiliary | (2) 7.5 | 62 | | | | * |
| | 3 PH 220V | Top Auger | 3 | 8.6 | 121 | 56.2 | 175 | 60 |
| | | Bottom Auger | 3 | 8.6 | | | | 60 |
| | | Fan | 15 | 39 | | | | 60 |
| | | (2) Auxiliary | (2) 7.5 | 40 | | | | * |
| | 3 PH 440V | Top Auger | 3 | 4.3 | 65 | 28.1 | 150 | 60 |
| | | Bottom Auger | 3 | 4.3 | | | | 60 |
| | | Fan | 15 | 19.5 | | | | 60 |
| | | (2) Auxiliary | (2) 7.5 | 20 | | | | * |

*Auxiliaries run through load and unload breakers.

## 10. Electrical Load Information

| Dryer Model # | Voltage | Motor | HP | Fuel Load Amps | Maximum Amps with Auxiliaries | Minimum Amps | Recommended Service in Amps | Branch Breaker in Amps |
|---|---|---|---|---|---|---|---|---|
| 400AB | 1 PH 230V | Top Auger | 5 | 26 | 231 | 130 | 350 | 100 |
| | | Bottom Auger | 5 | 26 | | | | 100 |
| | | Fan | 10 to 17 | 78 | | | | 100 |
| | | (2) Auxiliary | (2) 7.5 | 62 | | | | * |
| | 3 PH 220V | Top Auger | 5 | 13.2 | 145 | 65.4 | 200 | 60 |
| | | Bottom Auger | 5 | 13.2 | | | | 60 |
| | | Fan | 15 | 39 | | | | 60 |
| | | (2) Auxiliary | (2) 10 | 52 | | | | * |
| | 3 PH 440V | Top Auger | 5 | 6.6 | 78 | 32.7 | 150 | 60 |
| | | Bottom Auger | 5 | 6.6 | | | | 60 |
| | | Fan | 15 | 19.5 | | | | 60 |
| | | (2) Auxiliary | (2) 10 | 26 | | | | * |
| 415AB | 1 PH 230V | Top Auger | 5 | 26 | 252 | 148 | 350 | 100 |
| | | Bottom Auger | 5 | 26 | | | | 100 |
| | | Fan | (2) 10 to 12 | 96 | | | | 100 |
| | | (2) Auxiliary | (2) 7.5 | 62 | | | | * |
| | 3 PH 220V | Top Auger | 5 | 13.2 | 165 | 82.4 | 225 | 60 |
| | | Bottom Auger | 5 | 13.2 | | | | 60 |
| | | Fan | (2) 10 | 56 | | | | 60 |
| | | (2) Auxiliary | (2) 10 | 52 | | | | * |
| | 3 PH 440V | Top Auger | 5 | 6.6 | 82 | 41.2 | 150 | 60 |
| | | Bottom Auger | 5 | 6.6 | | | | 60 |
| | | Fan | (2) 10 | 28 | | | | 60 |
| | | (2) Auxiliary | (2) 10 | 26 | | | | * |
| 600AB | 1 PH 230V | Top Auger | 7.5 | 31 | 332 | 218 | 400 | 100 |
| | | Bottom Auger | 7.5 | 31 | | | | 100 |
| | | Fan | (2) 10 to 17 | 156 | | | | 100 |
| | | (2) Auxiliary | (2) 7.5 | 62 | | | | * |
| | 3 PH 220V | Top Auger | 7.5 | 20 | 235 | 118 | 300 | 90 |
| | | Bottom Auger | 7.5 | 20 | | | | 90 |
| | | Fan | (2) 15 | 78 | | | | 60 |
| | | (2) Auxiliary | (2)15 | 78 | | | | * |
| | 3 PH 440V | Top Auger | 7.5 | 10 | 123 | 59 | 200 | 60 |
| | | Bottom Auger | 7.5 | 10 | | | | 60 |
| | | Fan | (2) 15 | 39 | | | | 60 |
| | | (2) Auxiliary | (2) 15 | 39 | | | | * |

*Auxiliaries run through load and unload breakers.

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This equipment shall be installed in accordance with the current installation codes and applicable regulations which should be carefully followed in all cases. Authorities having jurisdiction should be consulted before installations are made.

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